

## ABSTRACT OF THE DISCLOSURE

A wheel support bearing assembly includes a sensor section (6) for detecting a target of detection, and a sensor signal transmitting section (9), and an  
5 electric power receiving section (8) for receiving by wireless an electric operating power. An antenna (8a, 9a) in one or both of the sensor signal transmitting section (9) and the electric power receiving section (8) is arranged in the knuckle (11). The sensor section (6), the sensor signal transmitting section (9) and the electric power receiving section (9) may be secured, as an unitary  
10 wireless sensor unit (4), to the knuckle (11). Alternatively, the sensor signal transmitting section (9) and the electric power receiving section (8) may be secured, as a unitary transmitting and receiving unit separate from the sensor section (6), to the knuckle (11).